

REMARKS

Applicant respectfully requests reconsideration in view of the amendment and following remarks. The applicant has incorporated the features of claim 13 into claim 1 and claim 20 into claim 15.

Claims 1-3 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitt et al. U.S. 5,476,653 ("Pitt") or Mück et al. U.S. Patent U.S. Patent No. 5,994,455 ("Mück") each in view of Kosinski EP 448037 ("EP '037") and Chapman et al. U.S. Patent No. 3,656,982 ("Chapman"). Claim 11 is rejected under 35 U.S.C. 103(a) over Pitt each in view of EP '037 and Chapman as applied to claim 1 above and further in view of Yokoyama et al. U.S. Patent No. 5,952,410 ("Yokoyama"). Claims 15-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mück or Pitt each in view of EP '037, Chapman and Yokoyama. The applicant respectfully traverses these rejections.

The object of the applicant's claimed invention was to develop colored POM molding compositions in which **the formaldehyde emission observed hitherto has been substantially reduced**, in fact, the formaldehyde emission, determined on test specimens in accordance with the German Automotive Industry Recommendation No. 275 (VDA 275), **is not more than 20 mg/kg.**, without impairing the known advantageous properties of POM. (see the specification at page 3, lines 22-25).

Pitt and Mück describe oxymethylene/oxyethylene copolymers. As the Examiner has recognized neither Pitt nor Mück described compositions that contain colorants (see the bottom of paragraph no. 8 in the bottom of page 2 of the Final Office Action). Neither Pitt and Mück discloses that the **formaldehyde emission, determined on test specimens in accordance with the German Automotive Industry Recommendation No. 275 (VDA 275), is not more than 20 mg/kg**

(see independent claims 1 and 15). This limitation the Examiner has asserted is taught by both Pitt and Mück and the applicant respectfully disagrees.

The oxymethylene/oxyethylene copolymers can be prepared with several alternative initiators (e.g. with Lewis acids, see Mück column 1 lines 35-39). There is no evidence in Pitt or Mück that copolymers containing oxymethylene and oxyethylene units and a colorant (pigment) leads to an increased formaldehyde emission and that this emission can be reduced by mixing specific prepared copolymers (with a strong protonic acid) with the colorant (pigment). For example, the preparation of the copolymers with Lewis acids (described in Mück) leads to a higher formaldehyde emission (see e.g., the present application comparative examples, wherein the copolymer is prepared with BF₃ (page 8 line 1, results page 10 table 1).

In the state of the art the use of N-containing stabilizers are known to increase e.g. light or melt stability (e.g. Kosinski page 6, line 4-19). Surprisingly, oxymethylene-oxyethylene copolymers prepared with a specific method (with strong protonic acids as initiator) leads to a low formaldehyde emission level if a colorant is added. There is **NO** indication in Mück, Kosinski nor Chapman that this specific combination (oxymethylene-oxyethylene copolymers in accordance with claim 1 and a colorant) to get colored copolymers results in a low emission level of formaldehyde, in particular, formaldehyde emission, determined on test specimens in accordance with the German Automotive Industry Recommendation No. 275 (VDA 275), is not more than 20 mg/kg.

The oxymethylene-oxyethylene copolymers described in Pitt are used as carrier for biological active factors e.g. for medicines. Because of the harmful effects for patients of an increased formaldehyde emission an addition of a colorant would be problematic, so nobody would combine polyoxymethylene-polyoxyethelene carriers for pharmaceutical use with colorants.

Kosinski describes polyacetal compositions which can comprise 12 different other ingredients which include colorants / pigments (page 12 lines 46-51). However, at page 12, Kosinski discloses

“ . . .other ingredients, modifiers and additives as are generally used in polyacetal molding resins, including [1] thermal stabilizers, [2] anti-oxidants, [3] pigments, [4] colorants, [5] toughening agents, [6] reinforcing agents, [7] UV stabilizers, [8] hindered amine stabilizers, [9] nucleating agents, [10] lubricants, [11] glass fibers, and [12] fillers. It should also be understood that **some pigments and colorants can, themselves, adversely affect the stability of polyacetal compositions.**”¹ (emphasis added)

Therefore, there is a selection required by the Examiner to selectively take colorants / pigments from the other ingredients. The Examiner has not supplied the proper motivation for this selection, especially in view of the last statement that “**some pigments and colorants can, themselves, adversely affect the stability of polyacetal compositions**”.

The increased formaldehyde emission of colored oxymethylene/oxyethylene copolymers is not discussed nor are corresponding polymer compositions explicitly described in the examples. In contrast to the present application, Kosinski describes mixtures of the polymer with hindered amines as light stabilizer as necessary limitation. Further a person of ordinary skill in the art couldn't find any evidence in Pitt, Mück or Kosinski to prepare copolymers containing oxymethylene and oxyethylene units mixed with a colorant (pigment), wherein the copolymer is prepared with a strong protonic acid to reduce the formaldehyde emission of the resulting colored copolymer compound.

Chapman describes only some pearlascent pigments for cosmetically usage (e.g. abstract). There are no compositions described which encompasses oxymethylene/oxyethylene

copolymers. In addition, there is no indication given which kind of oxymethylene/oxyethylene copolymers has to be used for the reduction of the formaldehyde emission raised through the mixture of said copolymer with a colorant (pigment).

The Examiner must consider the references as a whole, In re Yates, 211 USPQ 1149 (CCPA 1981). The Examiner cannot selectively pick and choose from the disclosed multitude of parameters **without any direction** as to the particular one selection of the reference **without proper motivation**. The mere fact that the prior art may be modified to reflect features of the claimed invention does not make modification, and hence claimed invention, obvious **unless the prior art suggested the desirability of such modification** is suggested by the prior art (In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984); In re Baird, 29 USPQ 2d 1550 (CAFC 1994) and In re Fritch, 23 USPQ 2nd. 1780 (Fed. Cir. 1992)). In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (in a determination under 35 U.S.C. § 103 it is impermissible to simply engage in a hindsight reconstruction of the claimed invention; the references themselves must provide some teaching whereby the applicant's combination would have been obvious); In re Dow Chemical Co., 837 F.2d 469,473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988) (under 35 U.S.C. § 103, both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure). The applicants disagree with the Examiner why one skilled in the art with the knowledge of the references would selectively modify the references in order to arrive at the applicants' claimed invention. The Examiner's argument is clearly based on hindsight reconstruction.

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching, suggestion, or incentive supporting this combination, although it may have been obvious to try various combinations of teachings of the

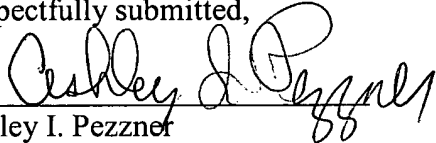
¹ The numbers were added by the applicant to emphasis that amount of selection required.

prior art references to achieve the applicant's claimed invention, such evidence does not establish prima facie case of obviousness (In re Geiger, 2 USPQ 2d. 1276 (Fed. Cir. 1987)). There would be no reason for one skilled in the art to combine Muck or Pitt each in view of Kosinski, Chapman and Yokoyama.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 05587-00327-US from which the undersigned is authorized to draw.

Respectfully submitted,

By 
Ashley I. Pezzner

Registration No.: 35,646
CONNOLLY BOVE LODGE & HUTZ LLP
1007 North Orange Street
P.O. Box 2207
Wilmington, Delaware 19899
(302) 658-9141
(302) 658-5614 (Fax)
Attorney for Applicant